

DEPARTMENT OF NATURAL RESOURCES

POSITION DESCRIPTION

Working Title: Private Water Hydrogeologist

Classification: Hydrogeologist – Senior

Location: Bureau of Drinking Water and Groundwater, GEF 2, Madison, WI

Position Summary:

This position is responsible for protecting groundwater quality and public health by applying geological, hydrogeological and groundwater contaminant analysis to support implementation of specific well construction and approval requirements in NR 812, Wis. Admin. Code. Activities include development of special well construction specifications to address site-specific groundwater and drinking water quality issues, to establish special well casing depth areas, and to support decisions for landfill variances, heat exchange projects, product approvals and other related approvals. This position also applies geological, hydrogeological and groundwater contaminant analysis to implement technical eligibility requirements of the state's Well Compensation program in NR 123, Wis. Adm. Code, and related statutes. This position will provide hydrogeologic, drinking water well construction, and groundwater quality expertise to department staff, and serve as a contact for the drilling industry and well owners. This position requires coordination and collaboration with department staff, well drilling industry, and other stake holders, and the ability to analyze and communicate the complexities of hydrogeology, groundwater quality and drinking water well construction in a concise and effective manner.

Geographic Scope & Travel Requirements: This position is part of the Private Water Supply Section of the Bureau of Drinking Water and Groundwater. This position involves providing training and guidance for licensing and continuing education throughout the state. Occasional in-state travel and occasional overnight stays will be required.

Scope of Authority: This position reports to the Private Water Supply Section Chief in the Bureau of Drinking Water and Groundwater. This position is non-supervisory. This position will work with general supervision to represent the section, bureau, division or department as needed with cross-program, interagency and industry groups. This position does not have final approval authority for plans, specifications, or legal decisions related to the private water supply subprogram.

TIME GOALS AND ACTIVITIES:

40% A. NR 812 Approvals

- A1. Conduct hydrogeologic analysis and process applications for NR 812-required approvals following standard operating procedures and in compliance with applicable regulations, for landfill variances, heat exchange projects, and anode drillholes.
- A2. Conduct technical reviews, prepare approvals and maintain lists for products used in well and heat exchange construction following standard operating procedures and in compliance with applicable regulations. Products include drilling fluids and additives, grout additives, well filling and sealing materials, well caps, pitless adapters, and well disinfection and rehabilitation products.
- A3. Coordinate technical reviews with other department staff including groundwater section, Waste and Materials Management and Remediation and Redevelopment programs, to ensure comprehensive data review and analysis.
- A4. Maintain and update standard operating procedures and guidance for implementing requirements.
- A5. Serve as a liaison to the drilling industry and department staff regarding requirements for assigned NR 812 approvals. Provide information and outreach including web page content, application materials, presentations, publications and other forms of communication.
- A6. Evaluate program performance, compile data, and prepare routine and annual reports.

30% B. Special Well Casing Depth Areas

- B1. Evaluate new areas of groundwater and drinking water contaminant concern for potential to establish new Special Well Casing Depth Areas (SWCDAs) following standard operating procedures and in compliance with applicable regulations.
- B2. Provide technical expertise and assistance to staff in assessing impacts to drinking water wells and groundwater quality. Conduct technical reviews and develop casing recommendations in response to groundwater quality problems.
- B3. Collaborate with groundwater section regarding areas where the aquifer has become contaminated and normal well construction requirements are not adequate. Compile and/or analyze hydrogeologic and water sampling data to support establishing new SWCDAs and revising or rescinding existing SWCDAs.
- B4. Manage SWCDA program files including published list of approved SWCDAs and associated GIS data layer.
- B5. Maintain and update standard operating procedures and guidance for implementing requirements.
- B6. Serve as a liaison to well drilling industry and department staff regarding Special Well Casing Depth Area requirements. Provide information and outreach including web page content, application materials, presentations, publications and other forms of communication.
- B7. Evaluate program performance, compile data, and prepare routine and annual reports.

20 % C. Well Compensation Grants

- C1. Conduct hydrogeologic analysis and technical review of grant claims to determine eligibility for well compensation grant funds and consistency with regulatory requirements.
- C3. Conduct hydrogeologic analysis and technical review of grant claims to identify construction requirements for replacement of contaminated wells.
- C4. Conduct technical review of well construction or well filling and sealing reports for projects that received Well Compensation grant funds, to evaluate compliance with code requirements and well compensation award conditions.
- C5. Provide information and pre-application assistance to drillers and well owners regarding technical and regulatory requirements for well compensation grants.

5 % D. Compliance Monitoring

- D1. Conduct technical review of construction reports for compliance with administrative code and approval requirements, including landfill variance, dual aquifer and Special Well Casing Depth Area wells, and heat exchange projects.
- D2. Follow stepped enforcement process for noncompliance with administrative code and approval requirements and make recommendations or corrective actions to gain compliance.

5% E. Other Duties as Assigned

- E1. Support continuous process improvements for program implementation, including regular updates to standard document templates and operating procedures, upgrades to program databases, and updates to program application materials and web page content.
- E2. Carry out special assignments in support of the bureau and agency.
- E3. Perform other duties as assigned by the Section Chief or Bureau Director.

KNOWLEDGE, SKILLS AND ABILITIES:

1. Knowledge of the principles of chemistry, groundwater chemistry, geology, hydrogeology, bacteriology, public health sanitation and microbiology.
2. Skill in the use of personal computers including word processing, spreadsheets and databases.
3. Knowledge of well construction, heat exchange construction and pump installation principles and practices.
4. Ability to interpret and apply statutes and administrative codes related to drinking water and groundwater program.
5. Ability to interpret maps, water sampling results, and geologic and monitoring data.
6. Ability to analyze hydrogeological and drinking water well construction issues.
7. Communication skills including technical writing as well as communicating technical and regulatory requirements to diverse audiences.
8. Skill in the use of DNR manuals, data management systems (Oracle-based) and GIS (ArcView software).
9. Knowledge of process improvement principles and practices.

PHYSICAL REQUIREMENTS & ENVIRONMENTAL FACTORS:

Strength Requirements

Sedentary work (occasional lifting of up to 15 pounds) about 95% over a year's time.

Light work (infrequent lifting of up to 50 pounds) about 5% over a year's time.

Physical

This position will spend a majority of time in an office setting or in meetings. Regular activities include talking, hearing, seeing, handling paper, sitting, and walking. The position will also occasionally spend time standing, carrying, lifting, reaching, climbing, bending at the waist, kneeling, and crouching.

Environmental Factors: The majority of the activities of this position occur primarily inside. This position will occasionally require outdoor field work including carrying light equipment from storage to a vehicle or carrying equipment from a vehicle to an inspection site. There may be situations involving sufficient noise to cause the employee to shout in order to be heard. There may be exposure to hazards near drilling sites such as unstable surfaces (i.e., rocks, silt, mud), moving mechanical parts and/or conditions that affect the respiratory system or skin, such as fumes or odors, that could result in bodily injury.

Equipment Used: Office equipment, GPS/navigation equipment, monitoring and sampling devices, electronic equipment/radios, and motorized vehicles. The position is occasionally required to travel statewide; therefore, they must have the ability to travel to locations throughout the state.

Telework Evaluation: Limited telework may be available for this position.